

**Notice of Allowability**

Application No.

09/829,365

Applicant(s)

KESLER, SCOTT B.

Examiner

Monica D. Harrison

Art Unit

2829

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to applicant's amendment filed on 8/22/03.
2. ☒ The allowed claim(s) is/are 21-32.
3. ☒ The drawings filed on 09 April 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

**Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.**

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892)  | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____             |
| 5 <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____               | 6 <input type="checkbox"/> Examiner's Amendment/Comment                             |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|  | 9 <input type="checkbox"/> Other  |

### DETAILED ACTION

1. Claims 21-32 are allowed over the prior art of record.

#### *Reasons for Allowance*

2. The following is an examiner's statement of reasons for allowance: The primary reason for allowance of the claims is that the prior art neither teaches nor fairly suggest an ignition diagnostic system for an internal combustion engine as presented in the independent claims 21, 31, and 32. Major emphasis is being placed upon the provisions of *"a logic circuit directing the first mirrored current to charge the capacitor if the ion current is detected during a first time period prior to generation of a spark across the electrode gap and thereafter directing discharge of the capacitor for fouled plug determination, the logic circuit directing the second mirrored current to charge the capacitor if the ion current is detected during a second time period following generation of a spark across the electrode gap and thereafter directing discharge of the capacitor for combustion quality determination (claim 21), a logic circuit direction discharge of the capacitor and producing an output signal having a pulse width corresponding to a duration of capacitor discharge, the output signal having a minimum pulse width in the absence of detection of the ion current, the minimum pulse width corresponding to the duration of capacitor discharge from the precharge level to a lower threshold (claim 31), and a logic circuit directing charging of the capacitor with the charging current and thereafter directing discharge of the capacitor, the logic circuit producing an output signal having a pulse width corresponding to a duration of capacitor discharge, the output signal having a pulse width indicative of a fouled plug condition (claim 32) "*, in combination with other limitations of said claims and their dependent ones.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

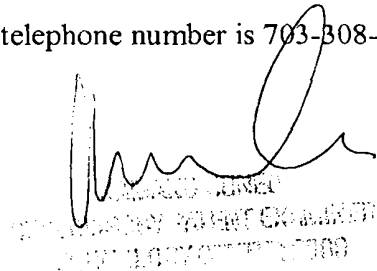
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica D. Harrison whose telephone number is 703-305-4758. The examiner can normally be reached on M-F 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kammie Cuneo can be reached on 703-308-1233. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

Monica D. Harrison  
AU 2829

Mdh  
October 3, 2003

A handwritten signature in black ink, appearing to read "Monica D. Harrison", is written over a circular official stamp. The stamp contains the text "UNITED STATES PATENT AND TRADEMARK OFFICE" around the perimeter and "ART UNIT 2829" in the center.